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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete If Known	
Application Number	10/708,281
Filing Date	2/22/2004
First Named Inventor	Roman Chistyakov
Art Unit	2821
Examiner Name	~~Don Kitsun Wong~~ A. Lie
Attorney Docket Number	ZON-016

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
AL	C39	VLADIMIROV, V., Voltage-Current Characteristics Of A Gas Magnetron In the Case Of Intense Cathode Sputtering, Sov. J. Plasma Phys., Jan-Feb. 1981, Pgs. 114-118, Vol. 7, No. 1.	
AL	C40	LUTSENKO, E.I., Instability Mechanisms In A High-Current Straight Discharge At A Low Gas Pressure, Sov. J. Plasma Phys., Jan.-Feb. 1984, Pgs. 87-95, Vol. 10, No. 1.	

Examiner Signature		Date Considered	05-06-2005

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Attorney Docket Number	ZON-016

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AL	C38	CHISTYAKOV, Roman, Plasma Source With Segmented Magnetron Cathode, Application No. 10/710,946, Filed: August 13, 2004.	

Examiner Signature		Date Considered	05-06-2005

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ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18
Stylesheet Version v18.0

Title of Invention	METHODS AND APPARATUS FOR GENERATING HIGH-DENSITY PLASMAS WITH IONIZATIONAL INSTABILITIES

Application Number: 10/708281
Confirmation Number: 2280
First Named Applicant: Roman Chistyakov
Attorney Docket Number: ZON-016
Search string: (5015493 or 6124675 or 6222321 or 6296742 or 6327163 or 6342132 or 6355992 or 6359424 or 6413382 or 6633017).pn.

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
AL	1	5015493	1991-05-14	Gruen		427	38
AL	2	6124675	2000-09-26	Bertrand, et al.		315	111.91
AL	3	6222321	2001-04-24	Scholl, et al.	B1	315	111.21
AL	4	6296742	2001-10-02	Kouznetsov	B1	204	192.12
AL	5	6327163	2001-12-04	Petr	B1	363	124
AL	6	6342132	2002-01-29	Rossnagel	B1	204	192.12
AL	7	6355992	2002-03-12	Via	B1	307	419
AL	8	6359424	2002-03-19	Iida, et al.	B2	323	251
AL	9	6413382	2002-07-02	Wang, et al.	B1	204	192.12
AL	10	6633017	2003-10-14	Drummond, et al.	B1	219	121.57

Signature

Examiner Name	Date
	05-06-2005

PTO/SB/08a (08-03)
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Sheet 1 of 5

Complete if Known	
Application Number	10/708,281
Filing Date	2/22/2004
First Named Inventor	Chistyakov
Art Unit	~~Not Yet Assigned~~ 2/22/04
Examiner Name	~~Not Yet Assigned~~ A. Lie
Attorney Docket Number	ZON-016

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US-			
		US-			
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
AL	B1	WO 98/40532	09/17/1998	Chemfilt R & D	———	
AL	B2	WO 02/103078 A1	12/27/2002	Chemfilt R & D	———	

Examiner Signature		Date Considered	05-06-2005

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 5

Complete If Known	
Application Number	10/708,281
Filing Date	2/22/2004
First Named Inventor	Chistyakov
Art Unit	~~Not Yet Assigned~~ 2821
Examiner Name	~~Not Yet Assigned~~ A. Lee
Attorney Docket Number	ZON-016

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
AL	C1	KOUZNETSOV, et al., A Novel Pulsed Magnetron Sputter Technique Utilizing Very High Target Power Densities, Surface and Coatings Technology, 1999, Pgs. 290-293, Vol. 122, Elsevier.	
AL	C2	STEINBRUCHEL, A Simple Formula For Low-Energy Sputtering Yields, Applied Physics A., 1985, Pgs. 37-42, Vol. 36, Springer, Verlag.	
AL	C3	DAUGHERTY, et al., Attachment-Dominated Electron-Beam-Ionized Discharges, Applied Physics Letters, May 15, 1976, Pgs. 581-583, Vol. 28, No. 10, American Institute of Physics.	
AL	C4	FAJANS, et al., Bifurcations In Elliptical, Asymmetric Non-Neutral Plasmas, Physics of Plasmas, October 2000, Pgs. 3929-3933, Vol. 7, No. 10, American Institute of Physics.	
AL	C5	DEKOVEN, et al., Carbon Thin Film Deposition Using High Power Pulsed Magnetron Sputtering, 46th Annual Technical Conference Proceedings, 2003, Pgs. 158-165, Society of Vacuum Coaters.	
AL	C6	CHOUEIRI, Characterization Of Oscillations In Closed Drift Thrusters, Pgs. 1-19.	
AL	C7	STARK, et al., Electron Heating In Atmospheric Pressure Glow Discharges, Journal of Applied Physics, April 2001, Pg. 3568, Vol. 89, No. 7, American Institute of Physics.	
AL	C8	GUDMUNDSSON, et al., Evolution Of The Electron Energy Distribution And Plasma Parameters In A Pulsed Magnetron Discharge, Applied Physics Letters, May 28, 2001, Pgs. 3427-3429, American Institute of Physics	
AL	C9	TIAN, et al., Experimental Investigation Of The Electrical Characteristics And Initiation Dynamics Of Pulsed High-Voltage Glow Discharge, Journal of Physics D: Applied Physics, Vol. 34, Pgs. 354-359, IOP Publishing Ltd., UK	
AL	C10	MOZGRIN, et al., High-Current Low-Pressure Quasi -Stationary Discharge In A Magnetic Field: Experimental Research, Plasma Physics Reports, 1995, Vol. 21, No. 5, Pgs. 400-409, Interperiodica Publishing	

Examiner Signature		Date Considered	05-06-2005

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 3 of 5

Complete If Known	
Application Number	10/708,281
Filing Date	2/22/2004
First Named Inventor	Chistyakov
Art Unit	~~Not Yet Assigned~~ 2821
Examiner Name	~~Not Yet Assigned~~ A. Lie
Attorney Docket Number	ZON-016

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Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
AL	C11	GARRIGUES, et al., Hybrid And Particle-In-Cell Models Of A Stationary Plasma Thruster, Plasma Sources Sci. Technol., 2000, Pgs. 219-226, Vol. 9, IOP Publishing Ltd., UK.	
AL	C12	KUDRYAVTSEV, et al., Ionization Relaxation In A Plasma Produced By A Pulsed Inert-Gas Discharge, Sov. Phys. Tech. Phys., January 1983, Pgs. 30-35, Vol. 28, No. 1, American Institute of Physcis.	
AL	C13	BIBERMAN, et al., Low-Temperature Plasmas With Nonequilibrium Ionization, Sov. Phys. Usp., June 1979, Pgs. 411-432, Vol. 22, No. 6.	
AL	C14	THORNTON, Magnetron Sputtering: Basic Physics And Application To Cylindrical Magnetrons, J. Vac. Sci. Technol. March/April 1978, Pgs. 171-177, Vol. 15, No. 2.	
AL	C15	HART, et al., Measuring The Growth Of Solitons From Normal Modes, [online]. Nonneutral Plasmas, South Hall Convention Center, November 19, Year unknown.	
AL	C16	HELMERSSON, Metallization By Pulsed High-Power Sputtering, [online]. [retrieved on November 21, 2003]. Retrieved from WWW.inf.liu.se/thinprogram/projects/p2.html.	
AL	C17	PISAREV, Modification Of The Surface Of Perforated Polymer MF-4SK In Low-Pressure, High Current Quasi-Stable Discharge Plasma In Magnetic Field, [online]. [retrieved on December 30, 2003]. Retrieved from WWW.tech-db.ru/lstc/db/nra.nsf/we/0624.	
AL	C18	GUDMUNDSSON, et al., Observation Of Ion-Acoustic Solitons In A Pulsed Magnetron Sputtering Discharge, 56th-Gaseous Electronics Conference-2003, October 24, 2003, Pgs. 1-14.	
AL	C19	MATOSSIAN, et al., Operating Characteristics Of A 100kV, 100kW Plasma Ion Implantation Facility, Surface Coatings & Technology, 1996, Pgs. 92-97, Vol. 85.	
AL	C20	FAJANS, et al., Second Harmonic Autoresonant Control Of The l=1 Diocotron Mode In Pure-Electron Plasmas, Physical Review E, September 2000, Pgs. 4131-4136, Vol. 62, No. 3.	

Examiner Signature		Date Considered	05-06-2005

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Sheet 4 of 5

Complete If Known	
Application Number	10/708,281
Filing Date	2/22/2004
First Named Inventor	Roman Chistyakov
Art Unit	~~Not Yet Assigned~~ 2821
Examiner Name	~~Not Yet Assigned~~ A. Lee
Attorney Docket Number	ZON-016

NON PATENT LITERATURE DOCUMENTS

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AL	C21	J.T. GUDMUNDSSON, et al., Spatial And Temporal Behavior Of The Plasma Parameters In A Pulsed Magnetron Discharge, Surface & Coatings Technology, 2002, Pgs. 249-256, Vol. 161, Elsevier Science	
AL	C22	BIBERMAN, et al., Chapter Eight: Transient Nonequilibrium Plasmas, Kinetics Of Nonequilibrium Low Temperature Plasmas, 1987, Pgs. 321, 360-372, Plenum Publishing Corporation, New York, USA	
AL	C23	GUDMUNDSSON, et al., Observation Of Solitons In A Pulsed Magnetron Sputtering Discharge [online]. [retrieved on December 8, 2003]. Retrieved from WWW.ens.org/ans/meet/GEC03/hans/abs/s300.html	
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AL	C26	Encyclopedia Of Low Temperature Plasma, Editor V.E. Fortov, 2000, Volume 3, Pg. 119.	✔
AL	C27	CHISTYAKOV, Roman, High Power Pulsed Magnetron Sputtering, Application No: 10/065,277, Filed: September 30, 2002.	
AL	C28	CHISTYAKOV, Roman, Method And Apparatus For Generating High-Density Plasma, Application No: 10/065,629, Filed: November 4, 2002.	
AL	C29	CHISTYAKOV, Roman, High Deposition Rate Sputtering, Application No: 10/065,739, Filed: November 14, 2002.	
AL	C30	CHISTYAKOV, Roman, High-Power Pulsed Magnetically Enhanced Plasma Processing, Application No: 10/065,551, Filed: October 29, 2002.	

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AL	C31	CHISTYAKOV, Roman, High-Density Plasma Source, Application No: 10/249,595, Filed: April 22, 2003.	
AL	C32	CHISTYAKOV, Roman, High-Density Plasma Source Using Excited Atoms, Application No: 10/249,844, Filed: May 122, 2003.	
AL	C33	CHISTYAKOV, Roman, Generation Of Uniformly Distributed Plasma, Application No: 10/249,773, Filed: May 6, 2003.	
AL	C34	CHISTYAKOV, Roman, Plasma Generation Using Multi-Step Ionization, Application No: 10/249,202, Filed: March 21, 2003.	
AL	C35	CHISTYAKOV, Roman, Plasma Source With Segmented Cathode, Application No: 60/481,671, Filed: November 19, 2003.	
AL	C36	HART, et al., Growth Of Soliton-like Structures From Normal Modes And Particle Loss From A Nonneutral Plasma, [online]. Non-Neutral Plasmas, Archibald/Cochran, 3rd Floor, Tower, November 7, 1995.	
AL	C37	HART, et al., Verification Of Solitons Grown From Normal Modes, [online]. Dusty Plasmas And Nonneutral Plasmas I, Imperial Ballroom, Fairmont, November 16, Year unknown.	

Examiner Signature		Date Considered	05-06-2005

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